DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-005025
Date Inspected: 11-Dec-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 630
OSM Departure Time: 1530
Location: Shanghai, China

CWI Name:	Geng Wei, Zhang Bao Wei	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes ☑ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG Assembly

Summary of Items Observed:

This report serves to document the events occurring on this date at the following location. Caltrans Quality Assurance (QA) Inspector Robert Vatcher arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

OBG Assembly Bay II

QA performed Green Tagging of the following Longitudinal Diaphragms accompanied by ABF and ZPMC representatives;

Longitudinal Diaphragm

5BE- LD010-005
5BE- LD017-006
5BE- LD018-006
5AE- LD001-009
5AE- LD002-009
4AE- LD008-001
4AE- LD001-001
4AE- LD002-001
3BE- LD006-001

3BE- LD008-002
3BE- LD011-001
3BE- LD012-001
3AE- LD003-002
3AE- LD004-002
3AE- LD003-001
3AE- LD004-001
3AE- LD020-001

QA could not however sign green tag release paperwork for 5BE- LD003-016, LD004-016, LD003-015 (all for no visual examination legible signature and final acceptance), 4BW- LD003-008 (outstanding visual issue not resolved), LD004-008 (Outstanding magnetic particle indication not resolved), 4AW- LD001-002, 4AE- LD015-002, LD016-002, 3BW-LD011-001 (all for no visual examination legible signature and final acceptance as well as outstanding magnetic particle indication not resolved), 3AE- LD017-001, LD018-001, LD019-001, LD015-001, LD016-001 (all for no visual examination legible signature and final acceptance).

5AE-

No Observed Welding Activity however QA observed multiple locations where grinding is occurring for breaking edges for paint.

No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time at DP351-001 to DP378-001. These panels have been partially welded by the FCAW process and already back ground. QA performed a cursory visual examination at this location. No apparent issues. DP459-001 to DP432-001 is presently having ceramic backing installed and will be ready for tack welding shortly.

5BE- QA observed multiple locations where grinding is occurring for breaking edges for paint.

Surveying being conducted.

QA observed that DP460-001 to DP433-001 & DP379-001 to DP352-001 are partially welded out and require multiple passes to be completed.

QA performed Welding procedure specification verification at SEG024*-028 deck panels DP460A & DP433A by the SAW process. QA measured welding parameters in accordance with welding procedure specification WPS-B-T-2221-B-L2C-S-2 utilizing non corroded or detritus bearing 4.0 mm diameter H14 electrode wire by qualified welding operator chen Xi Feng 052692. Measured amperage at 680.0. Voltage at 32.0, travel speed at 500 mm per minute. Flux was reclaimed and strained through a large rare earth magnet and immediately reused. QA performed a cursory visual examination of the previously joined area prior to further depositing of weld metal. ZPMC QC personnel Shi Lei was present for this welding evolution as well ensuring the 20C minimum preheat was established by way of a Fluke infrared temperature thermometer.

5CE- QA observed that DP353-001 to DP380-001 & DP434-001 to DP461-001 are welded out completely.

QA observed multiple locations where grinding is occurring for breaking edges for paint.

3AE- QA observed grinding being performed at diaphragm plate to diaphragm plate locations where joining had previously been conducted.

3BE- No Observed Welding Activity. QA observed grinding being performed at diaphragm plate to diaphragm plate locations where joining had previously been conducted.

4AE- No Observed Welding Activity. QA observed grinding being performed at diaphragm plate to diaphragm plate locations where joining had previously been conducted.

QA observed fitting being performed at deck panel DP30A to edge deck panel respectively (no component designation immediately available).

4BE- QA observed the in process joining of SEG020A*-005 deck plates (situated atop of the segment) DP77A & DP43A by the SAW process. QA measured welding parameters in accordance with welding procedure specification WPS-B-T-2221-B-L2C-S-2 utilizing non corroded or detritus bearing 4.0 mm diameter H14 electrode wire by qualified welding operator chen Xi Feng 052692. Measured amperage at 680.0. Voltage at 32.0, travel speed at 500 mm per minute. Flux was reclaimed and strained through a large rare earth magnet and immediately reused. QA performed a cursory visual examination of the previously joined area prior to further depositing of weld metal. ZPMC QC personnel Zhang Xian Ji was present for this welding evolution. ZPMC QC personnel Chen Chih Ming was available as well ensuring the 20C minimum preheat was established by way of a Fluke infrared temperature thermometer.

QA observed grinding being performed at diaphragm plate to diaphragm plate locations where joining had previously been conducted.

Mid bay-

QA observed the in process joining of SEG030A-006 bottom plates BP060-001 & BP168-001 by the SAW process. QA measured welding parameters in accordance with welding procedure specification WPS-B-T-2221-B-L2C-S-2 utilizing non corroded or detritus bearing 4.0 mm diameter H14 electrode wire by qualified welding operator Wang Min 048296. Qualified welding status was verified by the presence of certification card from the welders pocket Measured amperage at 620.0, Voltage at 31.0, travel speed at 510 millimeters per minute. Preheat was measured at 80.0 degrees Celsius. Flux was reclaimed and strained through a large rare earth magnet and immediately reused. QA performed a cursory visual examination of the previously joined area prior to further depositing of weld metal. ZPMC QC personnel Wang Jie was present for this welding evolution. The above mentioned items as observed and documented by QA appears to be in conformance with the contract documents.

5CW- No Observed Welding Activity

5BW- No Observed Welding Activity

5AW- No Observed Welding Activity

4BW- No Observed Welding Activity

4AW- No Observed Welding Activity

3BW- No Observed Welding Activity

3AW- No Observed Welding Activity

North Bay of OBG Assembly-

No Observed Welding Activity

North Sub-Assembly Area (Outside of OBG)

No observed joining operations

Summary of Conversations:

No relevant conversations this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Peter Dautermann, who represents the Office of Structural Materials for your project.

Inspected By:	Vatcher,Robert	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer